REMARKS

This Amendment is prepared in response to the telephone discussion with the Examiner on 3 July 2007.

Listing of the Claims

Pursuant to 37 CFR §1.121(c), this listing of the claims, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Amendment of the Drawings

In Fig. 5, the original drawing does not have a unit for the labeled numbers. A unit "bytes" has been added to each labeled number for a better understanding

Amendment of the Specification

Paragraph [0038] is amended for clarity.

Amendment of the Claims

Claims 2 and 9 are cancelled, and claims 1, 3-5, 7, 8, 10-12, 14, 15 and 20 are amended in this application.

Status of the Claims

Claims 1-26 are pending in the application.

Issues Raised by Paper No. 20070722

1. Claim 23 - 26 are rejected under 35 U.S.C. §101;

2. Claim 1,8,23 are rejected under 35 U.S.C. §102(e);

3. Claim 2-7, 9-14 are rejected as being dependent upon the rejected base claim 1, 8.

Claim Objections -35 U.S.C. §101 and 35 U.S.C. §102(e)

I   Claim 23 - 26 - Rejected under 35 U.S.C. §101

The Examiner rejected Claim 23 under 35 U.S.C. §101 based upon the Examiner's assertion that the claimed invention is directed to non-statutory subject matter. The applicant does not agree with this assertion.

Statutory subject matter is defined by 35 U.S.C. §101 which includes, in the list of patentable inventions, "any new and useful process, manufacture, or composition of matter" (quoting from the statue). It should be noted that the recitation of such function is permitted and, in fact, encouraged by 35 U.S.C. §112 (sixth paragraph), which states that an "element in a claim for a combination may be expresses as a means or step for performing a specified function without the recital of structure...in support thereof" (quoting from the statue). It will be statutory subject matter, if a functional explanation material is recorded on computer-readable medium.

Also, the *State Street Bank* decision removes the requirement for physical transformation. Physical transformation is merely one example of how a mathematical algorithm may bring about a useful application. Decision following on *State Street Bank* will further explain its scope and limits.   At present, however, if an invention in connection with a computer software is stated either as a machine with a series of means for performing a function limitations or as a process as a series of manipulative step, and if the machine or process transforms something into something else, even if the transformation is wholly within the computer and nothing physical outside the computer

is involved, that is, no pre- or post- solution activity is in a claim element, so long as the claimed software or process is transformative in some manner, it will be statutory subject matter under section 101. (AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 U.S.P.Q.2d (BNA) 1447, 1452 (Fed. Cir. 1999))

In support of this rejection, the Examiner further cited from the MPEP Eighth Edition, Rev .5, chapter 2100, page 2100-18, that:

> "In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory."

What the Examining staff has ignored is that rejected claims 23 through 26 define, *inter alia*,

> "A *computer-readable medium* having *computer-executable instructions* for performing a method... ."

At issue is whether the Examining staff's rejection is contrary to the express guidance provided by the Office to the Examining staff when considering patentability under 35 U.S.C. §101 of a "*computer-readable medium* having *computer-executable instructions* for performing a method"?

The attention of the Examining staff is respectfully invited to carefully consider §2100 of the *MPEP*. Applicant further respectfully submits that under current practice, a "*computer-readable medium* having *computer-executable instructions* for performing a method" is, as carefully explained by the Office in §2100 of the *MPEP*, "statutory

under" 35 U.S.C. §101.

In addition, the MPEP Eighth Edition, Rev .5, also states in Chapter 2100, page

2100-18, that:

> "In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035."

This guidance provided by the Office to the Examining staff confirms that even when

alternatively worded, Applicant's rejected claims 23 through 26 which define, *inter alia*,

> "A *computer-readable medium* having *computer-executable instructions* for performing a method... ."

is, under the guidance of whether the Examining staff's rejection is contrary to the

express guidance provided by the Office to the Examining staff by §2100 of the *MPEP*,

"**statutory** under" 35 U.S.C. §101. Consequently, this rejection is unfounded, and

contrary to Office policy. Its withdrawal is respectfully urged.

As was explained by the Court of Appeals for the Federal Circuit,

> "[a] memory containing stored information, as a whole, recited an article of manufacture." *In re Lowry, Edward, 32 F .3d 1579.*

Additionally,

> " For software inventions, the article of manufacture claim includes a computer (or other machine) readable medium storing a software program designed to perform one or more tasks." *"Atrticle of manufacture claims*

for computer related inventions", page 6 Burt Magen, 2002.

Consequently, "the computer-readable medium having computer-executable instructions"
in applicant's invention Claim 23 is a "computer-readable medium encoded with a
computer program" is as a whole recited an article of manufacture.

II.   Claim 1,8,23 - Rejected under 35 U.S.C. §102(e)

Claims 1, 8 and 23 were rejected as anticipated under 35 U.S.C. §102(e) as
anticipated by Magana U.S. Patent No. 6.487.418. Applicant respectfully traverses this
rejection for the following reasons.

(1)   In paragraph 4 of Paper No. 20070722, the Examiner further states that Magana
'969 discloses a channel selector comprising:

> "... a control unit for searching channel numbers used by the
> peripheral access point devices from the information from the
> wireless transmission and reception unit, deciding an optimal
> channel number from the channel numbers except for the used
> channel numbers, and setting the optimal channel number as a
> channel number;..."

Applicant does not agree with this assertion.

The applicant's invention employs an access point device to "transmit a probe
request frame to the peripheral access point devices" and "receive probe response frames
from the peripheral access point devices", or "receive beacon frames from the peripheral
access point devices"; to "extract the channel numbers from the received probe response
frames", or "extract the channel numbers from the beacon frames"; and to "store the

extracted channel numbers"; then to get the optimal channel by increasing and/or decreasing the unused channel numbers. The optimal channel of the selected access point preferably has an **interval of three channels from the peripheral access point devices.**

Magana '969, however, introduces a different procedure of the channel selection. Magana '969 employs a system which includes an antenna, a RF module, a controller, an A/D controller and a memory, and this system stores the digitized analog channel signal sampled from antenna, and then **selects the channel with the lowest RSSI** (Receive Signal Strength Indicator) level as the optimal channel.

In this invention, the optimal channel determined by this access point has a predetermined channel number interval with the channel numbers used by the peripheral access points, while Magana '969 selects the channel with the lowest RSSI level as the optimal channel. Therefore, the criterion for the optimal channel of this invention is different from one of Magana '969. Further, because the criterion for selecting the optimal channel of this invention is completely different from one introduced by Magana '969, the method of selecting the optimal channel in this invention is obviously totally different from one in Magana '969's invention.

Additionally, this invention nowhere states that a RF module is employed, and nowhere states the lowest RSSI level as the criterion for the optimal channel. On the other hand, Magana '969 nowhere teaches a beacon frame, a probe request frame or a probe response frame in the channel selection procedure.

Therefore, this invention employs a different method of channel selection from the

one introduced by Magana '969.

(2)   In paragraph 4 of Paper No. 20070722, the Examiner also states that Magana '969 employs "an operator terminal for managing and controlling the control unit". The Examiner pointed out the equipment 10 in Fig. 1 is the operator terminal.

The equipment 10 in Fig.1 of Magana '969 presents the channel selector which includes a RF module electrically connected to the micro controller via a micro controller bus for receiving control signals for setting the RF module to a particular channel. The "operator terminal" is a component of access point device of the applicant invention, and the functionality is to manage and control the connection unit and control unit in the access point device. Therefore, the channel selector of Magana '969 has different functionality from the operator terminal of this invention, and can not be substituted for the operator terminal.

(3)   Further, the applicant's invention employs an access point device to "transmit a probe request frame to the peripheral access point devices" and "receive probe response frames from the peripheral access point devices", or "receive beacon frames from the peripheral access point devices"; to "extract the channel numbers from the received probe response frames", or "extract the channel numbers from the beacon frames"; and to "store the extracted channel numbers"; then to get the optimal channel by increasing and/or decreasing the unused channel numbers. However, Magana '969 nowhere teaches a

beacon frame, a probe request frame or a probe response frame in the channel selection procedure.

Therefore, Magana '969 teaches a different method of channel selection from that of applicant's invention.

Considering the statement (1) and (3), Claim 1, 8, 23 could not be possibly to be considered as being anticipated by Magana '969.

III. Claim 2-7, 9-14 - Rejected as being dependent upon the rejected base claim 1, 8

Applicant notes that the examiner's proposed conclusion does not contemplate a channel selection in the WLAN system and the channel number selection procedure stated in this invention. Consequently, Claim 2-7, 9-14 are not tendered as being anticipated by Magana '969.

IV. Amendment of Claims

Claims 2 and 9 are cancelled, and claims 1, 3-5, 7, 8, 10-12, 14, 15 and 20 are amended in this application.

1.   Claim 1 is amended by incorporating the limitations of Claim 2 and Claim 2 is cancelled.

2.   Claim 5 is amended to appear in independent form while retaining all or a part of the recitation presently contained in dependent Claim 5.

3.   Claim 7 is amended to appear in independent form while retaining all or a part of the recitation presently contained in dependent Claim 7.

4.   Claim 8 is amended by incorporating the limitations of Claim 9 and Claim 9 is cancelled.

5.   Claim 12 is amended to appear in independent form while retaining all or a part of the recitation presently contained in dependent claim 12.

6.   Claim 14 is amended to appear in independent form while retaining all or a part of the recitation presently contained in dependent claim 14.

7.   Claim 15 and 20 are amended for a better understanding.

(1)   In Claim 15 as original, it is not clear that what the first unit transmits and receives respectively. For a better understanding of the Claim 1, an amendment of Claim 1 is made as follows:

"1. (Currently Amended) An access point device, comprising:
a wireless transmission and reception unit for transmitting information of the access point which the wireless transmission and reception unit locates at or receiving information of peripheral access point devices wirelessly;
a control unit for searching channel numbers used by the peripheral access point devices from the information from the wireless transmission and reception unit, deciding an optimal channel number from the channel numbers except for the used channel

numbers, and setting the optimal channel number as a channel number; [[and]]

the control unit, when searching channel numbers used by the peripheral access point devices, transmitting a probe request frame to the peripheral access point devices, receiving probe response frames from the peripheral access point devices for a predetermined time, extracting the channel numbers from the received probe response frames, and stores the extracted channel numbers; and

an operator terminal for managing and controlling the control unit."

Similar amendments are made to claims 5, 7 and 20.

(2) In Claim 20 as original, it is not clear that what the first unit transmits and receives respectively. Also, the functionality of the second unit is not necessarily repeated. For a better understanding of the Claim 20, an amendment of Claim 20 is made as follows:

"[[20]] 18. (Currently Amended) An apparatus, comprising:

a first unit transmitting information of the access point which the first unit locates at or receiving information of peripheral access point devices wirelessly;

a second unit searching channel numbers used by the peripheral access point devices received from the first unit, the second unit receiving beacon frames from the peripheral access point devices for a predetermined time and extracting the channel numbers from the beacon frames and storing the extracted channel numbers when searching the channel numbers when searching the channel numbers;

[[a]] the second unit searching channel numbers used by the peripheral access point devices from the information from the first unit, deciding an optimal channel number from the channel numbers except for the used channel numbers, and setting the optimal channel number as a channel number, when searching the channel numbers, the second unit receives beacon frames from the peripheral access point devices for a predetermined time, extracts the channel numbers from the beacon frames, and stores the extracted channel numbers; and

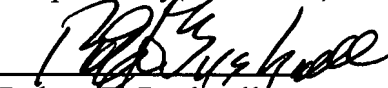a third unit managing and controlling the second unit."

8. Besides the major amendments 1-7 as shown above, some grammatical amendments are made, and the corresponding amendments are made for the dependent claims.

In view of the above, it is submitted that all of the claims now present in the application are patentable over the cited references, taken either alone or combination and accordingly should now be in a conditions suitable for allowance.

No other issues remaining, reconsideration and favorable action upon all of the claims now present in the application is respectfully requested.

A fee of $840.00 is incurred for the addition of four (4) independent claims in excess of 3. Applicant's check drawn to the order of Commissioner accompanies this Amendment. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

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